

ABSTRACT**METHOD AND SYSTEM FOR MODULATING AND DETECTING HIGH DATARATE
SYMBOL COMMUNICATIONS**

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A method and system for modulating and detecting high
datarate symbol communications provides superior performance in
channels having a fixed spectral efficiency. A quadrature
amplitude modulation (QAM) constellation and an optimized mapping
10 are employed to encode/detect a communications signal and error
correction is provided using high speed forward error correction
techniques. A log likelihood detection scheme and/or a novel
phase detector may be employed to further enhance performance.